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BUIS COMMENTS ON NEUTRON BOMB DEPLOYMENT, COHEN'S NEW BOOK

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[Commentary by Georges Buis on the book "Echec a la Guerre" [Holding War in Check]*by Samuel T. Cohen and Marc Geneste, Editions Copernic, 1980, 252 pages]

[Text] The introduction of a fearsome type of explosive device, the nuclear weapon, into the arsenals of the major belligerents was certainly not enough to get the Soviets to reject the "phenomenon of war." They simply set about integrating this nuclear firepower into their combat forces. There is no lack of Soviet statements to this effect. General Zavyalov has declared that "nuclear firepower will clear the way for the attacking forces." The renowned Marshal Sokolovski developed the same concept in his book "Military Strategy." Colonel Sirodenko has said quite bluntly that "the nuclear attack is a simultaneous attack throughout the depth of the opposing disposition of forces." In short, the Soviet military intelligentsia consider nuclear firepower to be the instrument for breaking through enemy defensive positions (while NATO still relies on tanks for such penetration!).

In their book "Echec a la Guerre," Samuel T. Cohen and Marc Geneste contend that within the European theater, the neutron bomb alone can preclude nuclear fire from making any opening in the NATO defensive system, or can, in any case, immediately close any such breach. They explain this bomb in a book which brings nuclear physics within everyone's grasp, and in which the caustic fury of the French officer angered at having his views ignored to date blends very effectively with the unruffled humor of the tenacious American scientist.

Death Strip

Before becoming the father of the "enhanced-radiation bomb"--the weapon's correct designation--, Samuel T. Cohen worked at Los Alamos, beginning in 1943, alongside of Neils Bohr, Fermi, and Oppenheimer. There he witnessed the birth of the first atomic bomb, and also of the two bombs which successively leveled Hiroshima and Nagasaki. Then he and his friends kept developing

*For additional reviews of, commentary on, and reaction to "Echec a la Guerre" see JPRS 76369, 5 September 1980, No 1618 of this series pp 1-17.

increasingly powerful bombs. Cohen saw the radius of damage drawn on target maps grow larger and larger, until one day he said to himself: "After all, there must be a way of killing the sniper in the church tower without razing the whole diocese." He reached the conclusion that the solution lay in an explosive device based on nuclear fusion and no longer on nuclear fission which is utilized in current tactical nuclear weapons. In the neutron bomb developed by Cohen, this fusion is the reaction between two heavy isotopes of hydrogen, namely deuterium and tritium.

In a fission-type weapon, 85 percent of the energy released occurs in the form of blast, heat, light, etc., and 5 percent in the form of neutrons. With the fusion-type bomb, the opposite occurs. "Some 80 percent of the energy is emitted in the form of very high-speed neutrons capable of traveling greater distances in air." The explosion becomes "an extremely brief flash of nuclear radiation: neutrons." Hence it is possible to employ, for example, against personnel in the open--and against armored vehicles which neutrons readily penetrate--a fusion-type weapon of 10 times less yield than a fission-type weapon of similar neutron strength. Inasmuch as attacking troops, whether or not they are shielded by armor, are compelled to advance at ground level, they are, therefore, vulnerable and can be effectively counterattacked because the miniaturized neutron weapon can be fired at short range and the defensive troops are, unlike the attackers, under cover.

The other side of these important and unquestionable qualities is that, to avoid slaughtering civilian populations, neutron bombs must of necessity be used on a glacis forming a continuous strip or belt of terrain all along the demarcation zone, and to the east of that zone as much as possible. Friendly populations to the west would have to be either evacuated once the defensive line is built, or instructed in withdrawing to nearby shelters (1.5 meters of earth divide the radiation effect by 1,000). Defending troops would be deployed throughout a sort of nuclear Maginot Line consisting of five rows of bunkers disposed in depth and protected by a "standard barrier of obstacles," by a "radiological minefield," or also, as Cohen recommends, by a system of pipes containing a radioactive fluid with a base of sodium carbonate in solution. This final obstacle could be built at unbeatable prices and would make it possible "to distribute radioactivity all along the barrier." Destruction teams attacking it would thereby destroy themselves.

Such a defense system would be much less expensive than the present flexible response system which is illogical in every respect and dooms NATO to having its back broken at the outset by a preemptive nuclear strike launched by the Warsaw Pact forces. Cohen and Geneste have no illusions, however, about their proposed system's chances of adoption. Admittedly the employment of neutron bombs is called for--in a manner of speaking--in the unpopulated vastness of steppes and deserts, and even more so on the oceans. We have been saying this for a long time in this very magazine. But the neutron bomb is too revolutionary to be accepted for use on land where, for the time being, the taboo of Hiroshima still stands as an obstacle. Samuel T. Cohen is quite familiar with this taboo. He told us about some 20 years of

disappointing briefings given to high-level White House and Pentagon officials. The day S. T. Cohen arrived at the White House for a reluctantly approved meeting with Eisenhower, the president could not see Cohen because he was practicing on the White House putting green. General Curtis Le May, a proven scrapper and excellent technical journeyman but a poor air force chief staff, believed that the only good bomb was, once and for all, the one "capable of razing by itself alone the entire Soviet Union." As for John Kennedy and Robert McNamara, they were both prisoners--and probably, as Americans, they were not wrong--of the conviction that employment of nuclear weapons at the very outset would automatically lead to escalation.

The authors also realize that objections impossible to overcome for political reasons will persist. The primary objection is that the FRG, rightly fascinated by the Ostpolitik, will probably never allow construction on its soil of a nuclear wall opposite the Warsaw Pact's bondstone and barbedwire wall.

Furthermore, the system is effective only if authority to fire is delegated at all times to the force commander or even to the bunker commander. But the latest American field service regulation--FM100-16, Operations--revises the present (and highly contingent) overall nuclear weapon employment authority delegated by the President of the United States to the Supreme Allied Commander Europe, and introduces an additional element of control by reserving to the occupant of the White House the right to personally open fire with nuclear weapons, round by round, whether it be concentrated fire or not

One-Shot Game

There is one point on which the authors have not fully convinced us, even though Samuel T. Cohen did go into greater "detail"--during a lengthy and free-wheeling conversation with us--about his active participation in the searching analyses made of this subject in the Pentagon and NATO. The point in question is the ratio of friendly "civilian" deaths to enemy military deaths in the center of Europe. Cohen did acknowledge, of course, that with the "tactical" fission-type bomb currently in service, three or four civilians would be killed for every military individual because of the magnitude of the collateral effects (houses collapsing, blast,etc.). He asserted, however, that small neutron bombs fired with pinpoint accuracy as artillery shells by a 155-mm gun, for example, would reverse this ratio several times in favor of the civilian population. And why not, after all, if--as in the days of the Roman Empire's Limes or Vauban's glacis--the right-minded civilian populations agree to evacuate the area or stay there and live on the alert close to their underground shelters? But what government will force this choice and obligation upon them?

This is, therefore, a book which raises, once again, the issue of fortress warfare, a type of warfare that was not always like the static, bogged-down Maginot Line warfare. It was a type of warfare which was often the indispensable basis of dynamic "operative" tactics. It was a war of peoples who, in defense of their freedom, chose to play the one-shot game of life

and death: the city of Beziers against Simon de Montfort, the city of Tyre against Alexander the Great, and hundreds of others. It does seem that the time for such wars is past.

In any event, it is our very firm opinion that where France is concerned, use of the neutron bomb is conceivable solely in operations at sea or in the desert, even though such use would still be undesirable. The neutron bomb can be included for such purposes in France's nuclear arsenal. Its use inside France proper would be completely stupid. With its strategy of deterrence, France has set itself up as a sanctuary and anything that questions the sanctuary's validity is antideterrent for the time being. The neutron bomb could be a remarkable instrument for the defense of Europeans--which Europeans?--the day Europe--which Europe?--is finally built. In that case, it would be the weapon of a line of demarcation whose alinement and defense are not France's problem for the moment.

The fact remains, however, that Marc Geneste and Samuel T. Cohen--who constantly take turns in expressing their views--do prompt some very necessary strategic reflection by presenting to the public the first coherent argument in favor of the neutron bomb.

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